

Active Share & the Three Pillars of Active Management

Skill, Conviction and Opportunity

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<http://activeshare.nd.edu> (research), <http://activeshare.info> (US mutual fund info)



Overview

Three Pillars of Active Management

- Skill – Conviction – Opportunity
1. What does “active” management mean?
 - Active Share: difference in holdings (security selection)
 2. How active are funds and why does it matter?
 - Adjusting fees for the Active Share: Active Fee
 3. Why would Active Share predict performance?
 - Using the ‘Three Pillars’ framework



The Three Pillars of Active Management

▶ Skill

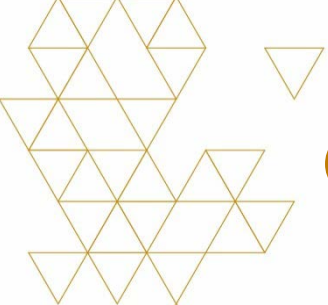
- Hard to measure (ex-ante and ex-post)
- Active Share and (persistent) skill
- How much are you paying for skill?

▶ Conviction

- How long do the manager's convictions last?
 - Manager patience AND high Active Share

▶ Opportunity

- How many stock picking opportunities exist?



Question 1

What Does “Active” Management Mean?



'Active' Means 'Different'

- ▶ Investors face a basic choice between
 - Actively managed funds
 - Passive benchmark (index fund or ETF)
- ▶ What does 'active' mean?
 - Basic definition: 'active' means different
 - Different performance only possible if fund is different
- ▶ How do we measure this?



Alternative Active Share Formula

$$\text{Active Share} = 100\% - \sum_{i=1} \text{Min}(w_{fund,i}, w_{benchmark,i})$$

- Minimum weight across fund & benchmark: **overlap**

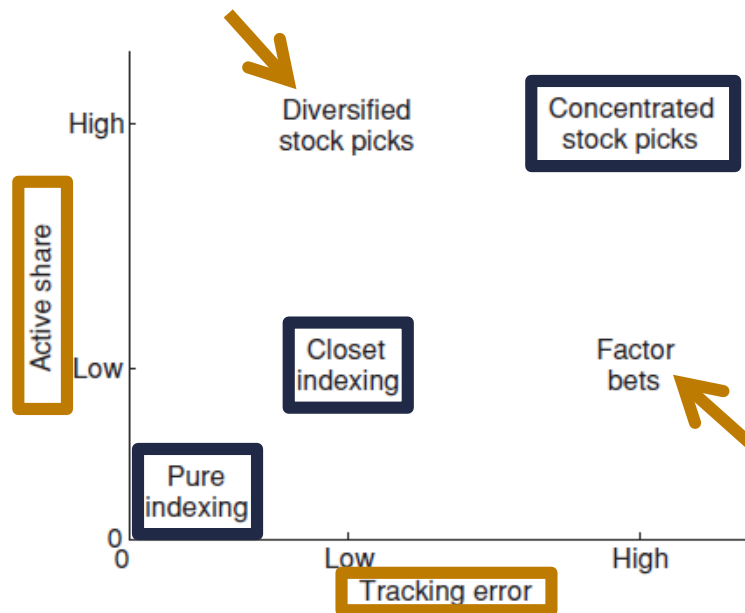
Active Share =

= 100% - Sum of overlapping portfolio weights

= Size of the active positions as a fraction of the entire portfolio

= **Proportion (*Share*) of portfolio that is different (*Active*) from its benchmark**

Active Share & Tracking Error Combined: Distinguish Different Fund Types



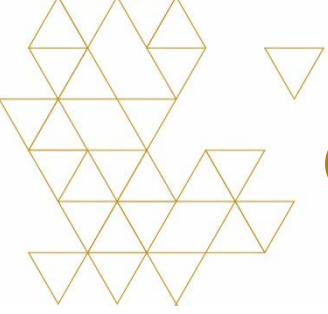
**Key question:
How diversified
are the active
positions?**

Figure 1

Different types of active and passive management

Active Share represents the fraction of portfolio holdings that differ from the benchmark index, thus emphasizing stock selection. Tracking error is the volatility of fund return in excess of the benchmark, so it emphasizes bets on systematic risk.

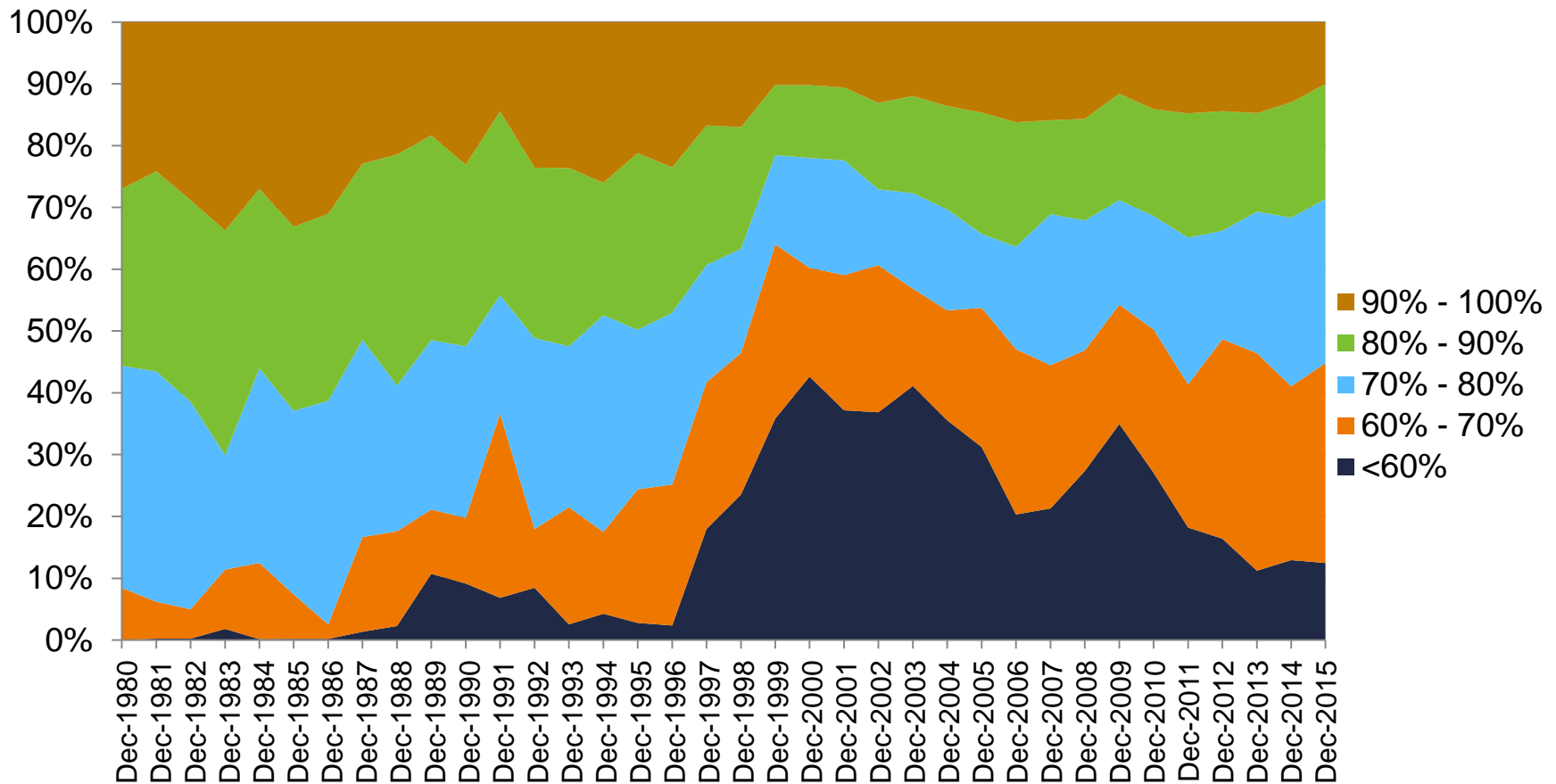
Source: Cremers-Petajisto, 2009



Question 2

How Active Are Funds, and Why Does It Matter?

Percentage of U.S. Retail Mutual Fund Assets by Active Share Range, 1980-2015





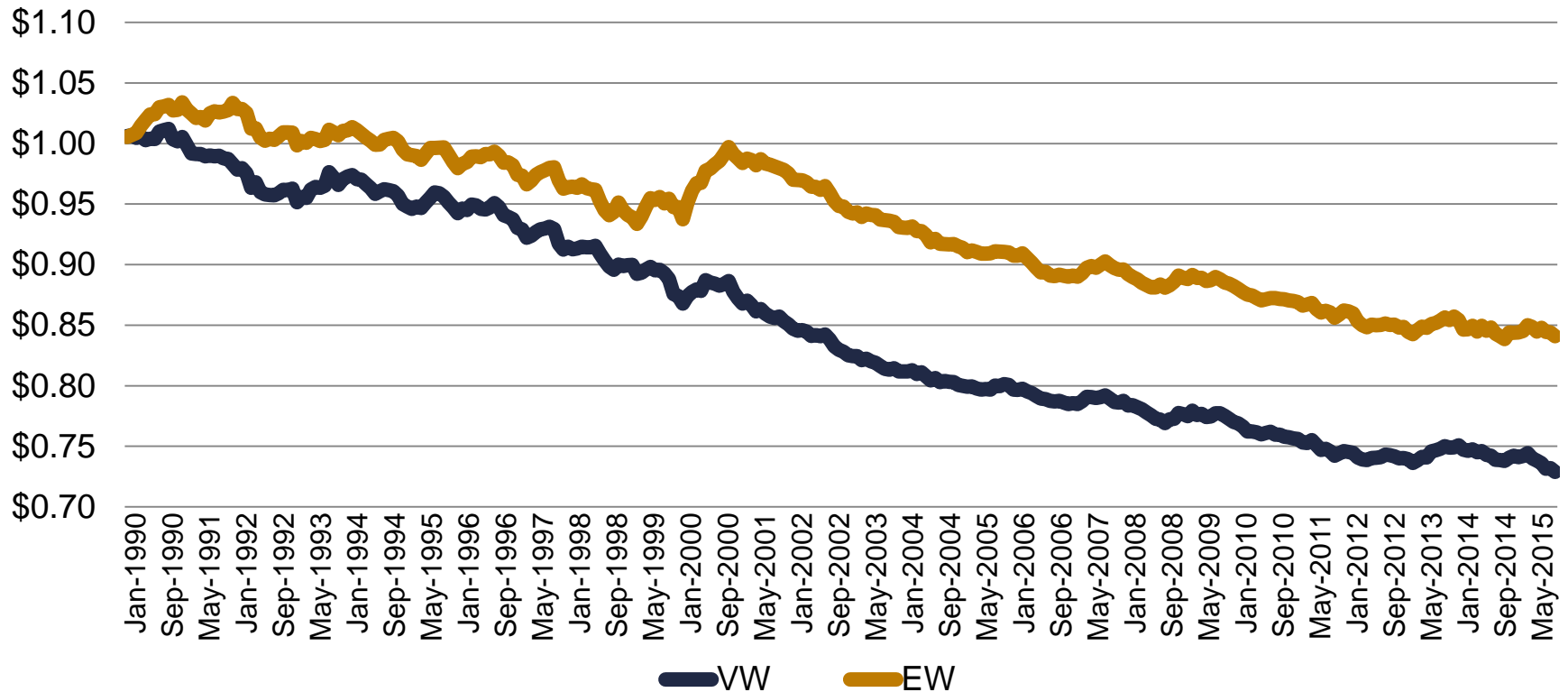
What Is the Problem with Low Active Share?

Nothing, if the fund is cheap

- ▶ Lower Active Share: higher hurdle for active positions
- ▶ Example:
 - Expense ratio: 100 bp/year over passive benchmark cost
 - Hurdle rate for *total* holdings?
 - Answer: at least 100 bp/year
 - Active Share: 50%
 - Hurdle rate for *active* holdings?
 - Answer: at least $100/0.5 = 200$ bp/year
 - Active Fee: $[\text{expenses over passive}]/[\text{Active Share}]$

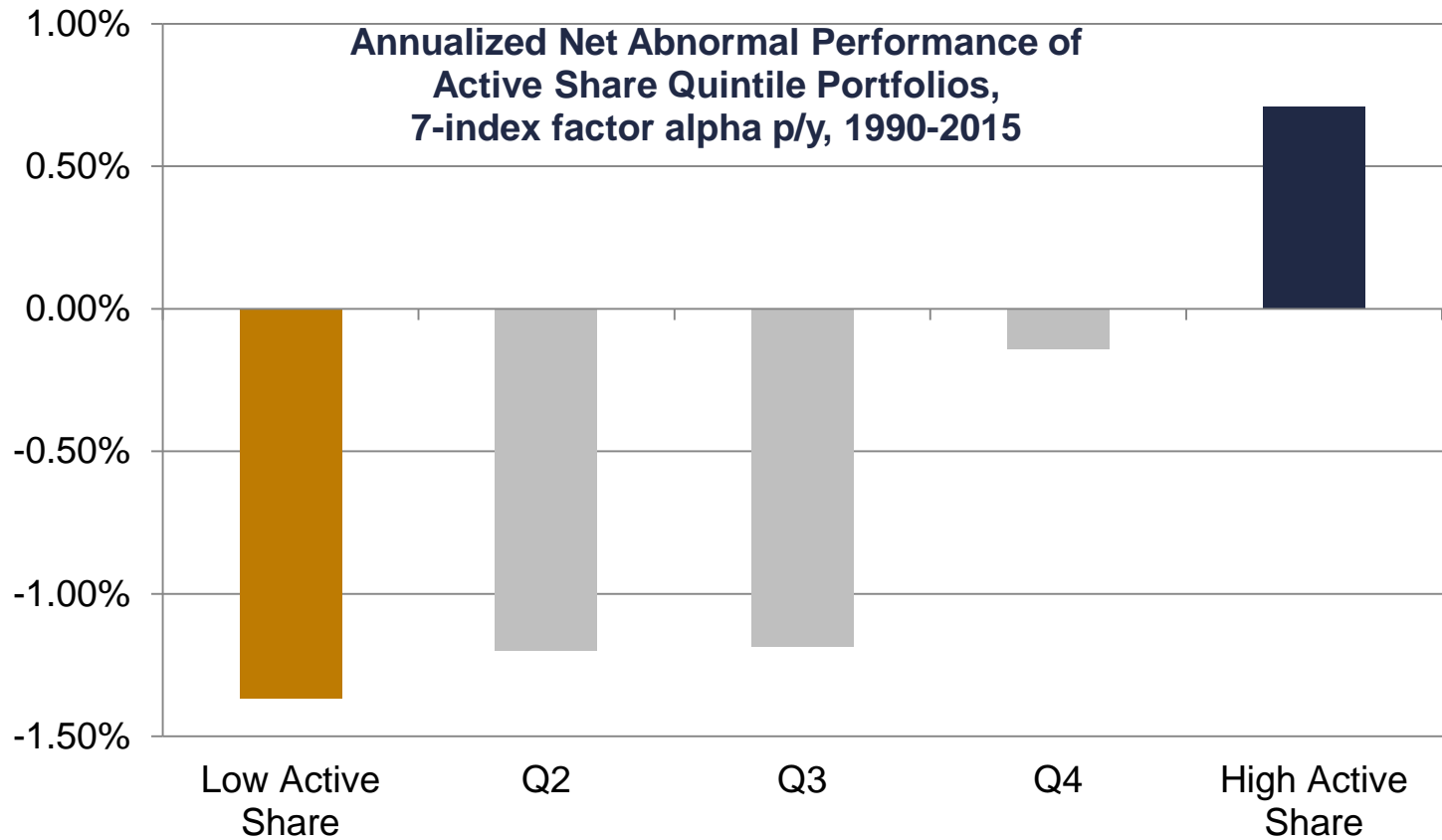
The Persistent Average Underperformance of Actively Managed U.S.-Equity Funds

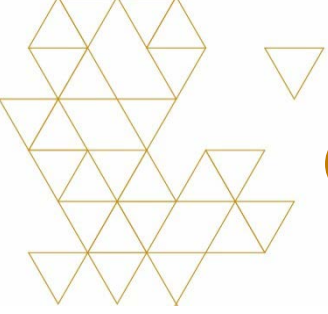
Plotted: cumulative abnormal performance of aggregate portfolio, 7-index-factor model



Alpha is the portion of a portfolio's total return that is unique to that portfolio and is independent of movements in its benchmark.

One Exception to Persistent Average Underperformance: High Active Share Funds Did Not Underperform





Question 3

Why Would Active Share Predict Performance?



Active Share and the 3 Pillars of Active Management

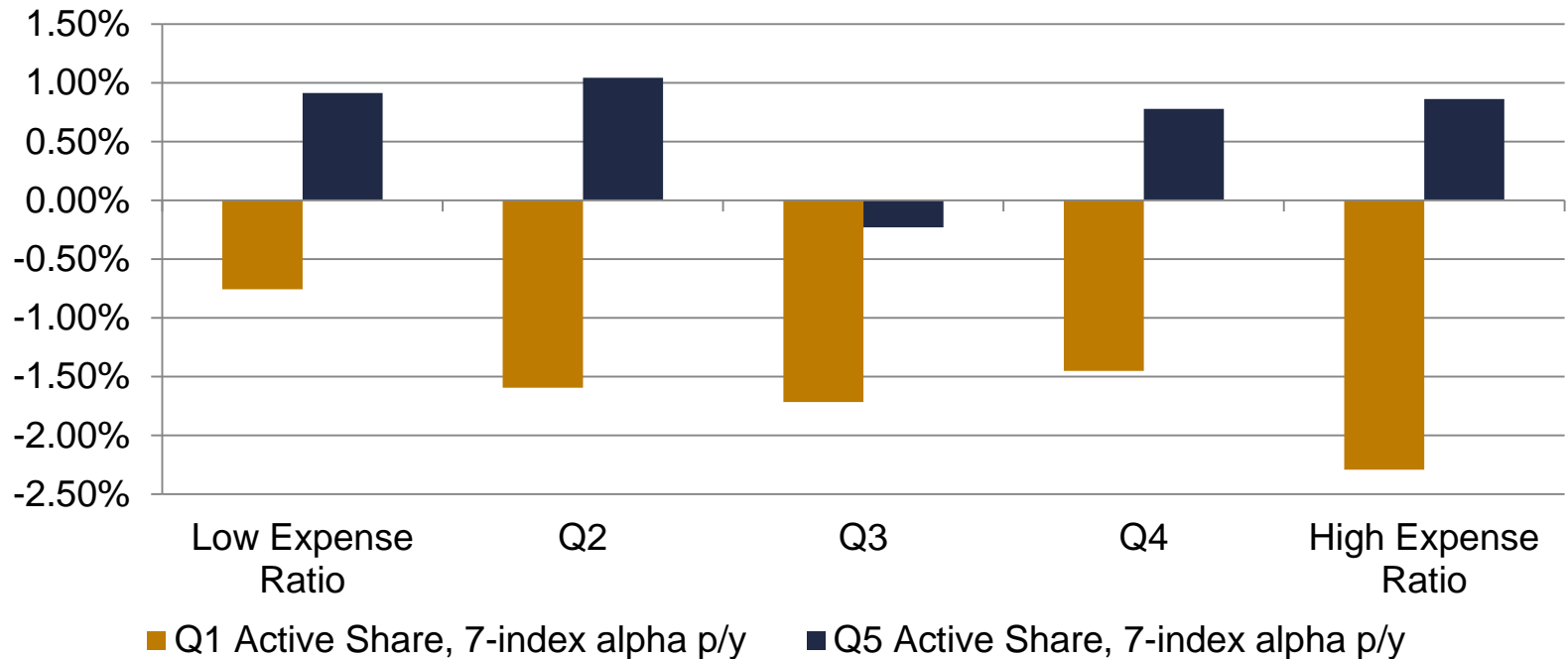
May 2017 Issue of *CFA Institute's Financial Analysts Journal*

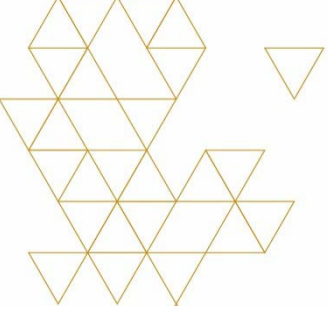
- ▶ Skill – Conviction – Opportunity
- ▶ Active Share: amount of stock-picking, not skill
- ▶ High Active Share...
 - ... requires conviction and opportunity
 - What if manager has high Active Share
 - ... and thus strong convictions and lots of opportunity
 - ... but no stock picking skills?
 - In competitive markets, will this manager survive?

Active Share and Expense Ratios

How Much Are You Paying for Stock Picking Skills?

Annualized Abnormal Net Performance of Expense Ratio Quintile Portfolios – Separately for Low and High Active Share Funds

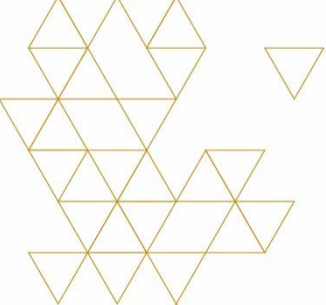




Polling Question 1

What is a long-term holding period for an active equity manager?

- a) Over 3 years
- b) Over 2 years
- c) Over 1 year
- d) Over 6 months
- e) Unsure



Polling Question 2

Over the last 30 years, holding periods of equity managers in the U.S. have become...

- a) Significantly more short term
- b) More short term
- c) Very stable without much change
- d) More long term
- e) Significantly more long term

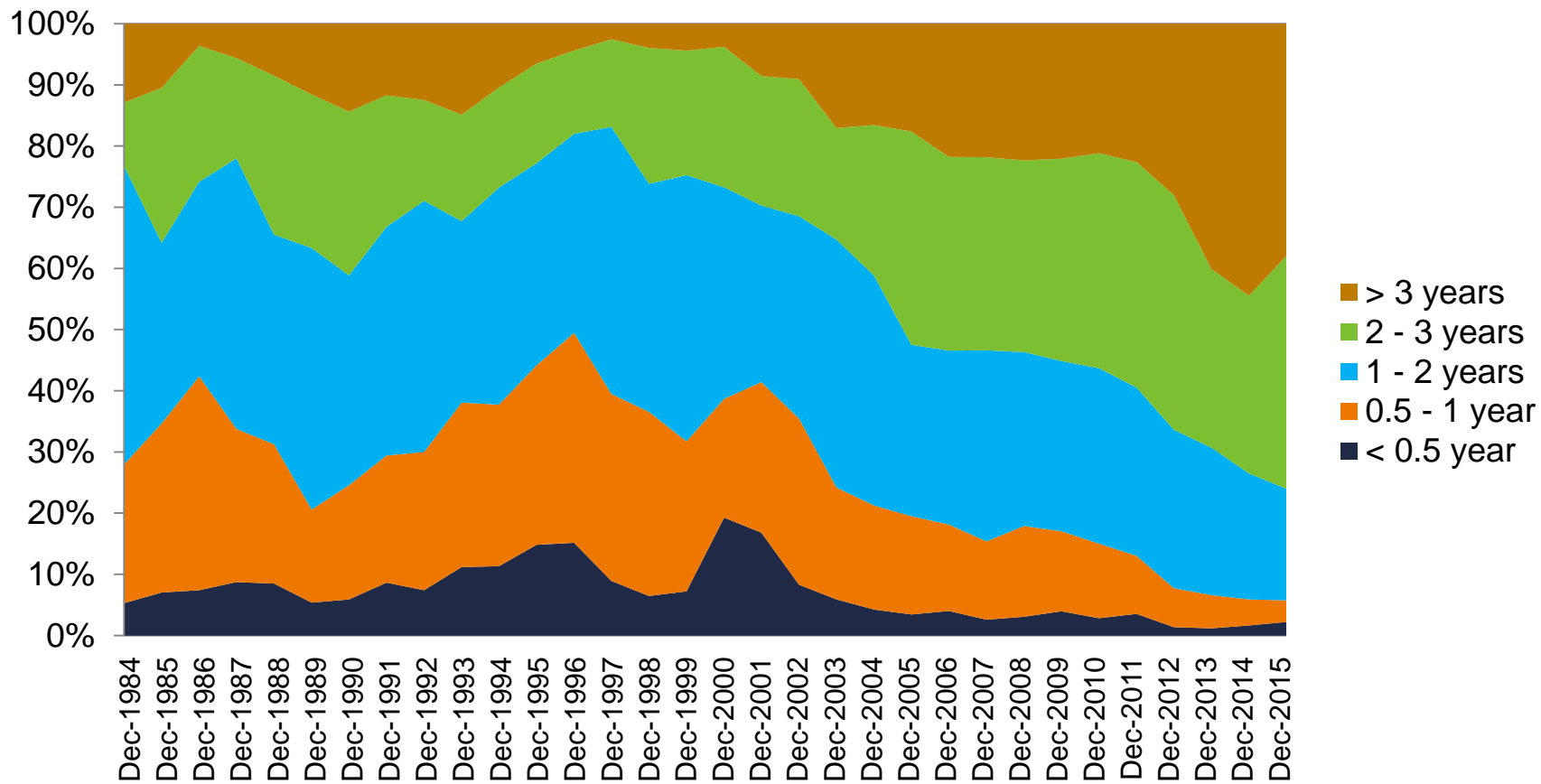


Active Share and Conviction

- ▶ High Active Share: high conviction
- ▶ Convictions with outperformance?
 - Economic friction / difficulty / limited arbitrage
- ▶ Example: patient strategies with high Active Share
 - Patient strategies: more risk for manager
 - May be adverse in short term
 - In equilibrium rewarded more
 - New measure: Fund Duration
 - Time average \$1 has been in the fund

“Patient Capital Outperformance”, Joint with Ankur Pareek, Journal of Financial Economics, 2016

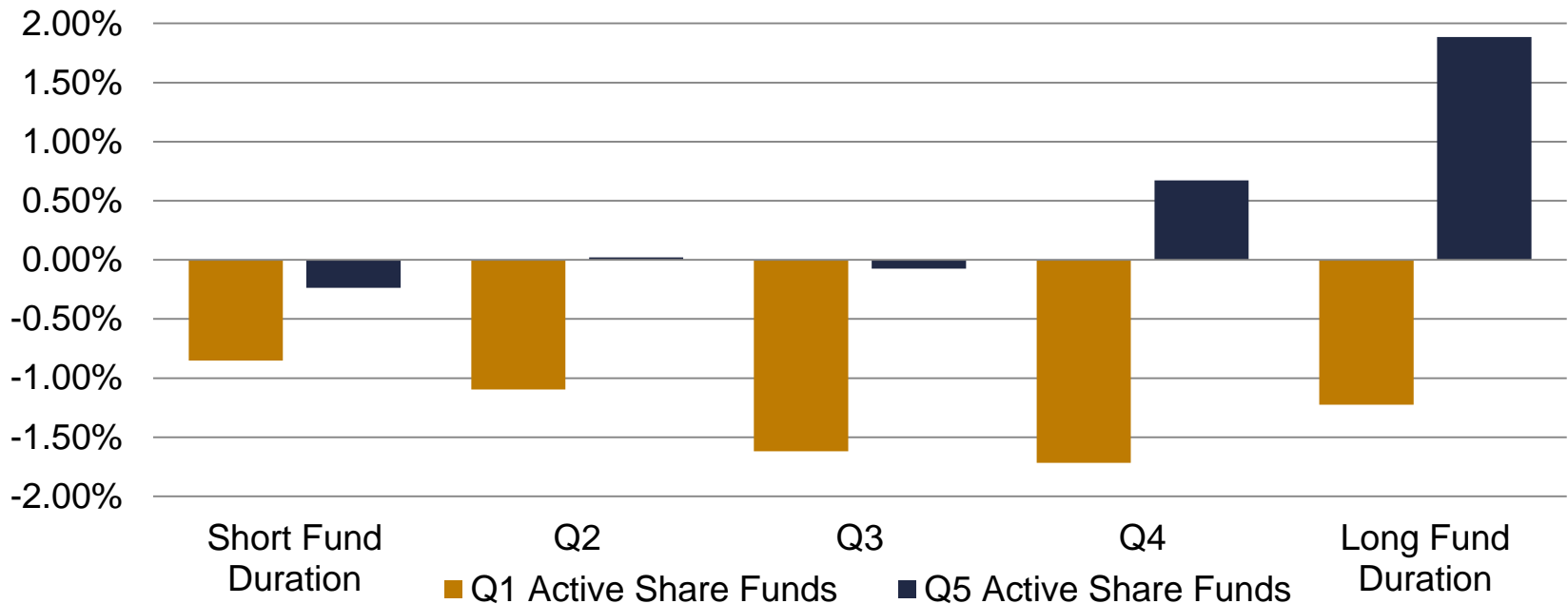
Percentage of U.S. Mutual Fund Assets by Fund Duration, 1984-2015



Active Share and Holding Durations

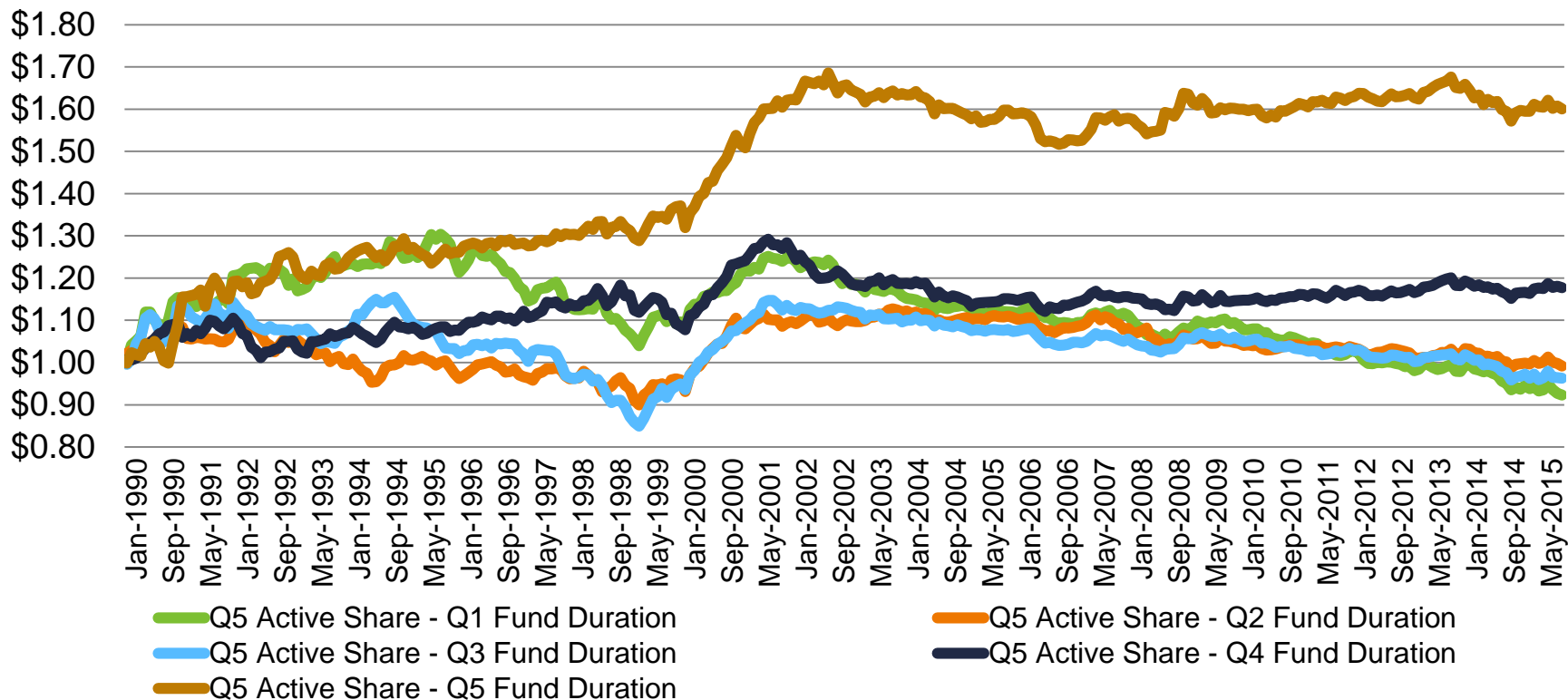
How long do the manager's convictions last?

Annualized Abnormal Performance of Fund Duration Quintile Portfolios, Low and High Active Share Funds Separately 7-index factor alpha p/y, 1990-2015



High Active Share & Patient Strategies

Cumulative Abnormal Net Performance of \$1 in Top-Quintile Active Share Funds, Sorted into Stock Duration Portfolios, 1990-2015



Active Share and Opportunities

- ▶ Where do most stock-picking opportunities exist?
 - Small caps versus large caps?
 - Countries with lots of passive investments or not?

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Indexing and active fund management: International evidence



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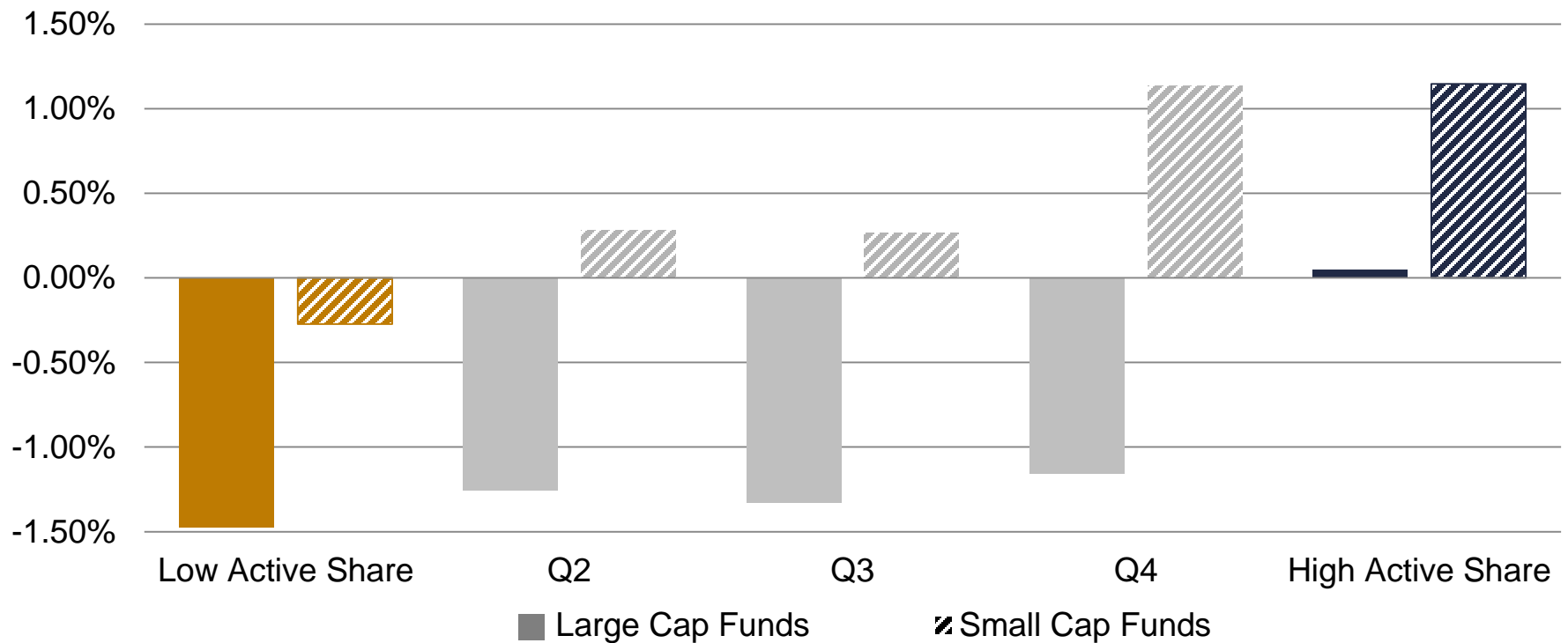
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Active Share Matters For Large & Small Cap Funds with More Stock Picking Opportunities For Small Caps?

Annualized Abnormal Performance of Active Share Quintile Portfolios, Large and Small Cap Funds Separately 7-index factor alpha p/y, 1990-2015





Conclusions

- ▶ Active Share Matters
 - Proportion of holdings that is different from benchmark
 - Skill – Conviction – Opportunity
- ▶ Closet Indexing
 - Not-cheap funds largely overlapping with benchmark
 - Low Active funds face much higher hurdle
- ▶ High Active Share funds have outperformed
 - Especially among small caps or with patient strategies
- ▶ Low Active Share funds have underperformed
 - Especially among large caps / if impatient / if expensive



Recent Research 1/5

- ▶ “Challenging the Conventional Wisdom on Active Management: A Review of the Past 20 Years of Academic Literature on Actively Managed Mutual Funds”
 - Financial Analysts Journal, Vol. 75, No. 4 (Fourth Quarter 2019)
 - Joint work with Jon A. Fulkerson and Timothy B. Riley
- ▶ ‘Conventional wisdom’: active management does not create value for investors
 - Average fund underperforms after fees
 - No positive performance persistence
 - Any managerial skill is taken away by high costs
- ▶ Our review: conventional wisdom is too negative on the value of active management
 - Average fund does not underperform relative to **tradable** (not theoretical) benchmarks
 - Positive performance persistence for subsets of funds (e.g., top 5%, or with high Active Share)
 - Underperformance driven by low Active Share funds that are not cheap; outperformance can be driven by various dimensions (patience / concentration / timing / dispersion / emerging markets)



Recent Research 2/5

- ▶ Is the prospectus benchmark appropriate?
 - “Benchmark Discrepancies and Mutual Fund Performance Evaluation”
 - Published in Journal of Financial and Quantitative Analysis (2022)
 - Joint work with Jon A. Fulkerson and Timothy Riley
- ▶ Use holdings to identify whether a mutual fund has a benchmark discrepancy
 - Prospectus benchmark: not best match for a fund’s investment strategy for about 25% of funds
- ▶ Main result
 - Funds with benchmark discrepancy tend to be riskier than their prospectus benchmarks indicate
 - As a result, such funds on average outperform their prospectus benchmarks—before further risk-adjusting—despite underperforming the benchmarks that best match their portfolios



Recent Research 3/5

▶ Active Share of Bond Funds

- Why Have Actively Managed Bond Funds Remained Popular?
 - White Paper (2021); joint work with Jaewon Choi and Tim Riley
- Calculate Active Share at different levels: issue, issuer, ratings and maturity level

▶ Main conclusion:

- Passive bond funds are making lots of active bets
- Bond funds with higher active share persistently
 - earn higher alphas (and outperform ‘passive’ bond funds)
 - demonstrate lower downside risk, and
 - exhibit less flow sensitivity to poor performance (consistent with alleviating run risk).



Recent Research 4/5

- ▶ Active Share and the Predictability of the Performance of Separate Accounts
 - Published in the Financial Analysts Journal (2022)
 - Joint work with Jon Fulkerson and Timothy Riley
- ▶ Out-of-sample test of earlier work; time period 2007 – 2019
- ▶ Main results:
 - On net, the average separate account underperforms
 - Those with high active share outperform AND have positive performance persistence:
 - Among high active share separate accounts, a portfolio of those with strong past performance has a subsequent net alpha of 1.38% per year (t-stat = 2.11)
 - That result strengthens when return dispersion is high and among separate accounts with a small cap style, a fundamental investment approach, or lower cash holdings



Recent Research 5/5

▶ Active ESG Share

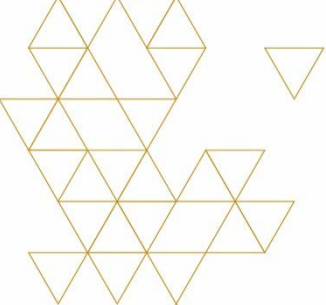
- White paper, not publicly available yet
- Joint work with Rafa Zambrana and Timothy Riley

▶ Is there material information in ESG ratings?

- Active ESG Share: extent to which fund holdings have different ESG rating distribution
 - Not directional, rather: to what extent do ESG ratings matter for portfolio construction?

▶ Main results:

- Active ESG Share: positively related to future fund performance
 - But only for ESG funds, not for non-ESG funds
 - Positive predictability: evidence for materiality of ESG ratings
 - ESG fund only: supports ESG requiring specialization
 - Results strongest for stocks with disagreement among ESG ratings: opportunity for active management
- Funds with higher ESG ratings tend to underperform: perhaps overbought?



Touchstone Securities, Inc., has partnered with Professor Martijn Cremers to provide consulting services. Touchstone and Professor Martijn Cremers are independent of each other.

Active Share measures the percentage of the Fund's holdings that differ from those of the benchmark. It is calculated by taking the sum of the absolute difference between all of the holdings and weights in the portfolio and those of the benchmark holdings and weights and dividing the result by two. Index performance is not indicative of fund performance. Investing in an index is not possible. Active Share is not a performance measurement. There are no assurances that any strategy or investment approach will meet its objectives. This information should not be considered as investment advice or a recommendation of any particular security, strategy or investment product. Past performance is not indicative of future results.

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